

Appl. No. 10/634,492
Amdt. Dated November 11, 2004
Reply to Office action of August 31, 2004

R E M A R K S

Reconsideration of the above-identified application is respectfully requested in view of the foregoing amendments and the following remarks.

This invention is a unique box wrench having a dual hinged socket. The socket can attach to the distal end of a simple ratchet handle or lug. The socket comprises two elements, hinged halfway around the socket cavity. A pin can be inserted through a hole in hinged teeth at both hinges to connect both elements. Either of these pins can be removed to open the socket. The inventive wrench can be fabricated as part of the handle to create a low profile. It is the function of this box wrench to perform in tight spaces as a close-ended tool. This prevents the inconvenience often encountered by open-ended wrenches, which often fall off their nuts and bolts.

Claims 3 and 6 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 3 and 6 have been clarified, adding "said portion of a handle." Since it is believed that the rejection of claims 3 and 6 has been overcome, Applicant respectfully traverses the rejection of claims 3 and 6.

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Claims 1 and 2 were rejected under 35 U.S.C. §102(b) as being anticipated by FISHER. The structure of FISHER's device is substantially different from the structure of Applicant's invention as discussed below. It is clear that these structural differences are intended to produce considerably different functions. In line 12, FISHER describes the object of his invention to "provide a wrench for pipework." This is quite distinct from Applicant, whose object is to provide an improved box wrench. The improved box wrench is described by Applicant as "a box wrench comprising a dual hinged socket that can encircle tubes, hoses, and bar stock in order to remove locking nuts" (page 1, line 4).

FISHER discloses a "... wrench [that] consists of the handle 1, which is provided with the lug 2. The working end of the handle 1 is provided with the integral bifurcations 3 3, which are provided on their faces with the ratchet-teeth 4. The said bifurcations are slightly curved or concaved Fig. 2. The extreme outer ends of the bifurcations 3 3 are provided with the integral shoulders 5, which extend substantially at right angles to the longitudinal axes of the said bifurcations. The cross-bar 6 connects the said bifurcations and is riveted to the same, as indicated at 7 in Fig.2." (lines 22 through 35) The bifurcated structure of FISHER's device (Fig. 1) by necessity exceeds the width of the typical nut, in order to achieve the function desired by FISHER, and thus FISHER's device will not successfully grip the typical nut.

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In addition, FISHER's structure is different from Applicant's invention in its complexity. FISHER requires the manufacture of a handle with bifurcations that must be described with three dimensions. Applicant's invention can be described using only two dimensions and a constant thickness. Also, FISHER requires two jaws, a crossbar and a link to encircle the socket cavity, while Applicant requires only one, element 16, in addition to the handle element 15.

Applicant's invention is significantly different from FISHER's device in simplicity. Clearly, there are several significant differences in structure and in function between the device described by FISHER and Applicant's invention.

These structural differences create important differences in utility. The utility of Applicant's box wrench is to allow for convenient work in tight areas where accessibility is a problem. Each instance of the use of the Applicant's box wrench requires the selection of a specific size wrench, which is fitted over the nut to be rotated by opening the second element 16 around the hinge and then closing the second element 16 by insertion of the locking pin 24. The locking pins shown in Figures 1, 2a and 2b, and described on page 6 lines 22 - 24 have been added by amendment to claims 1 and 4, to make the structure of the claimed invention clear. Applicant's box wrench can be used in restricted environments where it is important to not allow the wrench to disengage from the nut, since the

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inventive wrench cannot be removed from the nut inadvertently, but only by removal of the pin. In the case of FISHER, the opening is not pinned closed, but maintains its closure through the tension on the teeth against the crossbar caused by the torque against the nut or bolt. If one were to have to release from the nut or bolt with each successive turn, as required by the function of Applicant's invention, FISHER's link element 10 would be likely to release from the crossbar and require reattachment. Applicant prevents this inconvenience by using a pin element 24 that holds the socket in place at all times. In addition, Applicant's box wrench can perform clockwise and counterclockwise rotation while maintaining this closure. In contrast, FISHER's device would need to be unattached and then reapplied in the opposite direction because of the unpinned linking mechanism and the direction of the teeth.

Therefore, the Applicant's invention is significantly different from the disclosure of FISHER in structure. Since it is believed that FISHER does not anticipate the invention, and the rejection of claims 1 and 2, as presently amended, has been overcome, Applicant respectfully traverses the rejection of claims 1 and 2 under 35 U.S.C. §102(b) as being anticipated by FISHER.

Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over FISHER in view of SCULL. SCULL describes a double square socket that attaches to a "click type torque wrench handle" (column 2 line 32). This click type torque wrench would not work in Applicant's invention. The

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square attachment hole 27 in Applicant's invention is offset from the center axis of the socket cavity 18, as shown in Figure 1, and as now recited in amended claims 3 and 6. A click type ratchet that stays attached during counter-rotation will result in a permanent angle difference between the wrench and the ratchet rather than returning to the starting position. A simple ratchet handle or lug attachment that does not have a click-type backstroke is required by Applicant's invention. This separates the handle attachment of SCULL from that of Applicant.

Furthermore, the Examiner states "FISHER discloses all of the claimed subject matter except for having a square hole in the handle." As described hereinabove, FISHER is different in both structure and function from Applicant's invention. There is no motivation in FISHER to modify his patent with the teachings of SCULL; but even if there were such motivation, the addition of SCULL adding a square socket that attaches to a click-type ratchet to the teachings of FISHER in no way anticipates, suggests or renders obvious Applicant's invention any more than does FISHER alone.

Since it is believed that the rejection of claim 3 has been overcome, Applicant respectfully traverses the rejection of claim 3 as being anticipated by FISHER in view of SCULL.

Claims 4 and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over FISHER in view of SCOTT. FISHER

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is said to "disclose all of the claimed subject matter except for having an elongate arm." As described hereinabove, FISHER is different in both structure and function from Applicant's invention. The Examiner describes SCOTT's device as including an "elongated arm extending from the first socket element and having plural openings (9) therein." The elongated arm, however, is a feature distinguishing the first and second embodiment of Applicant's design. Because of the structure of Applicant's invention, the invention can be used in tight spaces as a box wrench as described hereinabove. Applicant's box wrench can also be fabricated as part of the handle providing a low profile. Furthermore, because of the unique structure of Applicant's invention over the device of FISHER, and FISHER and SCOTT, it can accomplish these functions in with simple, pinned, dual-hinges. The locking pins shown in Figures 1 and 2 have been added by amendment to claims 1 and 4, and both claims 1 and 4 recite the use of pins and dual-hinges. Neither FISHER nor SCOTT, nor a combination of both FISHER and SCOTT can accomplish these aspects or show these structural features. Since it is believed that the rejection of claims 4 and 5 has been overcome, Applicant respectfully traverses the rejection of claims 4 and 5 as being unpatentable over FISHER in view of SCOTT.

Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over FISHER in view of SCOTT as applied above, in further view of SCULL. The Examiner states "SCULL discloses a square hole in the handle. It would have been

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obvious to one skilled in the art to form the device of FISHER with a square hole to enable the engagement of a wrench to provide torque thereto as taught by SCULL." As described hereinabove, SCULL describes an attachment specifically for a click-type ratchet. Applicant's invention, however, need not make use of such a click-type ratchet and uses instead a simple handle or lug attachment. Furthermore, as described hereinabove, the devices of both FISHER and SCOTT, because of their different structure, cannot accomplish the recited aspects of Applicant's invention, either together or separately. Since it is believed that the rejection of claim 6 has been overcome, Applicant respectfully traverses the rejection of claim 6 as being unpatentable over FISHER in view of SCOTT and further in view of SCULL.

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In view of the foregoing amendments and remarks,
Applicant respectfully requests that claims 1 - 6 be
allowed and the application be passed to issue.

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On

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